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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/033,268	03/02/1998	MARK T. MAYBURY	MTR97-01PA	1887

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EXAMINER

SRIVASTAVA, VIVEK

ART UNIT	PAPER NUMBER
2611	6

DATE MAILED: 06/17/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)
	09/033,268	MAYBURY ET AL.
	Examiner Vivek Srivastava	Art Unit 2611

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

1) Responsive to communication(s) filed on 17 March 2003.

2a) This action is FINAL. 2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

4) Claim(s) 1-57 and 59-62 is/are pending in the application.

4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

5) Claim(s) 59-62 is/are allowed.

6) Claim(s) 1-57 is/are rejected.

7) Claim(s) \_\_\_\_\_ is/are objected to.

8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) The proposed drawing correction filed on \_\_\_\_\_ is: a) approved b) disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.

12) The oath or declaration is objected to by the Examiner.

#### Priority under 35 U.S.C. §§ 119 and 120

13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All b) Some \* c) None of:

- Certified copies of the priority documents have been received.
- Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
- Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a)  The translation of the foreign language provisional application has been received.

15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

#### Attachment(s)

1) <input type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____.
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.	6) <input type="checkbox"/> Other: _____.

## DETAILED ACTION

### ***Response to Arguments***

Applicant argues that Ahmad does not teach one to form a model of a multimedia presentation based upon event cues, and then classifying that presentation based upon how well it matches such a model, as recited in claim 1 element (a).

The Examiner respectfully disagrees. Ahmed meets the broadly claimed "event cues" as discussed in the previous office action. Since the "event cues" are not further defined, Ahmed meets the claimed limitation.

Applicant argues the distinction between keywords and named entries and that Ahmed uses keywords and not name entries.

The Examiner respectfully disagrees. Ahmed discloses the broadly claimed "named entities" and in those claims where named entities are more clearly defined it would have been obvious to modify Ahmed to include the claimed limitation. As a result, the Applicant's arguments are not persuasive.

Applicant argues that Ahmed's "update from" is not an introductory term. The Examiner respectfully disagrees. The word "update from" meets the broadly claimed introductory term. As a result, the Applicant's argument is not persuasive.

Applicant argues that Ahmed fails to disclose the claimed story segments. The Examiner respectfully disagrees. The "headline news" in fig 2B meets the broadly claimed limitation.

***Claim Rejections - 35 U.S.C. § 102***

**I. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:**

A person shall be entitled to a patent unless -

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371© of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

**II. Claims 1-11, 13, 15, 17, 19, 20-24, and 28-54 are rejected under 35 U.S.C. 102(e) as being anticipated by Ahmed.**

Considering claims 1, 40, 43, 44, and 55 Ahmed discloses a system for automatically processing a plurality of streams (multi info streams are met by 'audio', 'video' and 'text' see col 33 lines 49-52) to classify event cues within the received data stream, wherein the event cues are text data, caption data, audio data and video data (see col 15 lines 25-42, col 17 lines 26-40, col 23 lines 10-45 and col 24 lines 18-63). The event cues detected are compared or matched to existing cues in specific classes or categories to classify the incoming data into an appropriate category or class (see col 17 lines 25-41 and col 18 lines 25-40). By searching through the classified cues, Ahmed discloses comparing and matching the unclassified cues with the classified cues to correctly classify and place the story segments in the correct category or

classification. Thus Ahmed discloses selecting at least one contiguous portion of the multimedia presentation as a story segment, by matching a model of expected event cues with observed event cues in at least one information stream and to classify the presentations to which specific multimedia presentation belongs. The claimed story segment is depicted by Ahmed in fig 2-b. In particular figure 2-b depicts classifying news into a plurality of categories (see items 215 and 214) wherein a story segments are provided for each category (see "Erin: A Tropical Storm, etc.). Further Ahmed discloses extracting text data from a text information stream which corresponds to the story segment (see col 23 lines 35-59 and col 17 lines 25-41), extracting named entities from the text data (see col 23 lines 55-59 and col 15 lines 25-41) and extracting story summary data using the named entities as a basis (see col 15 lines 25 - 40 and fig 2-b, the news and sports stories retrieved are classified under "news" or "sports"). Further, Ahmed discloses displaying "keyframes" or "thumbnail" images (see col 16 lines 64-67) which is inherently extracted from the "imagery system" since it is displayed (see fig 2-b item 213 "Headline News"). Ahmed clearly depicts displaying the keyframe "Headline News" with the story summary data (see fig 2-b). Ahmed also discloses selecting a keyframe enabling a user to display a representative segment. In particular, by selecting keyframes "Headline News" or "Sports" in fig 2-b a user can access a representative story segment(s).

Considering claims 2 and 30, Ahmed inherently discloses a "machine" (met by system controller 103, data storage device and primary and secondary acquisition device in fig 1) which compare detected cues including transitions in data (met by "we go now to" or "update from" in col 24 lines 37-41) to existing or expected developed from observed event cues occurring in a class of media presentations cues to classify

the detected cues and representative story segments in the correct category or class (see col 17 lines 25-41 and col 18 lines 25-40).

Considering claim 3, Ahmed discloses the cues can be audio clues by detecting pause recognition in audio (see col 24 lines 58-60). Ahmed discloses the claimed “plurality of time difference based cues” because a large time difference in words or sounds in the audio would indicated a pause in the audio.

Considering claim 4, Ahmed discloses the claimed “wherein the expected event cues comprise a plurality of intrastream cues taken from a given information stream” (see col 23 lines 55-60 and col 24 lines 39-40, the cues “we go now to” and “update from” are taken cues take within the middle of the information stream or “intrastream”).

Considering claims 6-11, Ahmed discloses detecting specific cues used in classifying data including text information, closed caption words, closed caption punctuation cues, token phrases, text strings (col 17 lines 24-41, col 23 lines 18-22, col 23 lines 54-59, col 24 lines 37-41).

Considering claim 13, Ahmed discloses the claimed “named entity” and “text string” (see col 23 lines 56-59).

Considering claim 15, Ahmed discloses the claimed “named entity” and “closed caption punctuation clue” (see col 23 lines 55-59, note: punctuation met by comma’s).

Considering claim 17, Ahmed discloses the claimed “introductory news broadcast terms” (see col 24 lines 37-41, met by “update from”).

Considering claims 19 and 22, Ahmed discloses the claimed “anchor to reporter hand-off phases (see col 23 lines 39-41).

Considering claims 20, 21 and 23, Ahmed discloses the claimed “station” and “reporter named entity” (see col 23 lines 25-60).

Considering claim 24, Ahmed discloses the claimed "leaders to highlights of upcoming news stores" (see col 24 lines 37-41, met by "more on that" which is a leader to an upcoming story).

Considering claims 28 and 29, Ahmed discloses the claimed "named entities" (see col 23 lines 55-59, see "Jane Doe" for name or "Anytown, USA" for location).

Considering claim 31, Ahmed discloses the claimed "wherein the model of expected even cues is developed by statistical analysis of observed event cues" (see col 25 lines 30-67, col 28 lines 35-55, col 29 lines 45-65).

Considering claim 32, Ahmed discloses taking cues from a video stream which inherently comprises images and thus discloses the claimed "expected event cues are taken from an image information stream" (see col 25 lines 30-40).

Considering claim 33, Ahmed discloses the claimed "reporter frame" (see col 23 lines 55-59 and col 24 lines 37-41).

Considering claim 34, Ahmed discloses the claimed "wherein the event cues are taken from an audio information stream" (see col 24 lines 42-46).

Considering claim 35, Ahmed discloses a cues from audio pause recognition which meets the claimed "silence detection" (see col 24 lines 58-60).

Considering claim 36, Ahmed discloses the claimed "news stories" (see col 15 lines 25 - 42).

Considering claim 37, Ahmed discloses cues which start a story segment (see col 24 lines 39-41 see "we go now to").

Considering claims 38 and 47, Ahmed discloses a method of processing representation of multimedia presentation having multi info streams (multi info streams are met by 'audio', 'video' and 'text' see col 33 lines 49-52) comprising the steps of summarizing segments of text, audio and video see col 33 lines 33-61) and thus

discloses the claimed "selecting at least one contiguous portion of the multimedia presentation as a story segment". Further, since text data is extracted from the received stream and is used to compile the summary, Ahmed discloses "extracting text information from a text information stream corresponding to the story segment as text data" and "extracting story summary data from the text data (see col 33 line 49 - col 34 line 39). Ahmed further discloses linking together a stored representation of the text data, summary data and name entity data (see fig b, "Erin: A Tropical Storm" meets the claimed 'named entity data' and 'text' and 'summary' data are met by the data description of "Erin: A Tropical Storm"). Ahmed also discloses displaying multiple summary elements representative of the extracted story segments (see fig 2-b which displays multiple stories wherein each story has multiple elements including the title, description, time and location).

Considering claim 39, Ahmed discloses storing the all the data including summary data, named entity data for story segments ans one or more files one a file server (file server met by "data storage device 104" in fig 1). Further, the server is connected to the Internet which meets the "computer network" limitation (see col 11 lines 40-65). Further, since a user can "browse" the data and categories, Ahmed discloses the claimed "allowing access to the stored representations of news story segments available to a browser program running on the client computer connected to the network' (see col 11 lines 31-65).

Considering claim 41, Ahmed discloses detecting the number of words occurring in a segment as a means for selecting a segment as a category or class (see col 28 lines 36-55) and thus discloses the claimed "determining a frequency of occurrence for the named entities per sentence in a story segment and selecting a sentence with a greatest named entity frequency of occurrence as a topic sentence".

Considering claim 42, Ahmed discloses detecting which segment has a greater similarity to a primary segment (see col 29 lines 18-44) including detecting the frequency or number of words or “greatest named entity frequency of occurrence” in a segment (see col 28 lines 26-55) and thus discloses the claimed “if more than one sentence has a greatest named entity frequency of occurrence, selecting the sentence closest to the beginning of the story as the topic sentence” limitation.

Considering claim 45, Ahmed discloses wherein the claimed “wherein the story segment contains a reporter segment and the key frame is selected from the middle of the reporter segment (see col 24 lines 37-41, the phrase “we go now to” or “more on that” is the middle of a reporter segment).

Considering claim 46, Ahmed discloses the claimed “wherein the story segment contains an anchor booth segment and the keyframe is selected from the middle of the anchor booth segment” (see col 24 lines 37-41, phrases “we go now to”, “update from” or “more on that” meets the claimed middle of the anchor booth segment).

Considering claim 48, Ahmed discloses the plurality of elements of the story displayed together including the title, description, time and location (see fig 2-b).

Considering claim 49, Ahmed discloses the name of the summary (see “Erin: A Tropical Storm” in fig 2-b) and thus discloses the claimed limitation.

Considering claim 50, Ahmed discloses the claimed “summary of sentences” (see description of “Erin: A Tropical Storm” in fig 2-b).

Considering claim 51, Ahmed discloses the claimed summary presentation elements comprise a hyperlink to a source media element of the segment (see fig 2-b, hyperlinks 213 and 214 take user to source of information).

Considering claim 52, Ahmed discloses the claimed hyperlinks which lead to presentation of additional elements of the story segment including named entities (see

fig 2-b, selecting "Headline News" leads to headline news stories and selecting the sports link 215 leads to sports news, stories and named entities).

Considering claims 53 and 54, Ahmed discloses selecting a hyperlink for searching for related stories and presenting a thumbnail view comprising key frames from the multiple story segments (see fig 2-b, by selecting "Headline News", news under "Headline News" is searched and retrieved and displayed including the "Headline News" keyframe 213 and multiple story segments 214).

***Claim Rejections - 35 U.S.C. § 103***

**III. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:**

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**IV. Claims 12, 14, 16, 18, and 25-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ahmed.**

Considering claim 12, Ahmed discloses cues including a name followed by a comma's in a sentence as a means for indicating a break between segments. It would have been obvious modifying Ahmed to include ":" would have had the same effect of quickly identifying a break in a segment. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Ahmed to include the claimed ":" to quickly identify a break in a segment.

Considering claim 14, Ahmed discloses cues including a token phrase "Jane Doe, WXYZ news, reporting live from Anytown, USA" to indicate a break between segments. It would have been obvious modifying Ahmed to include "I'm" followed by the person's name would have also provided a cue indicating a break between segments since news reporters often identify themselves by "I'm" followed by their name. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Ahmed to include the claimed "I'm" followed by a name to quickly indicate a break between segments since this phrase is often used by reporters.

Considering claim 16, Ahmed discloses cues including a name followed by a comma's in a sentence as a means for indicating a break between segments. It would have been obvious modifying Ahmed to include a name followed by ":" would have had the same effect of quickly identifying a break in a segment. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Ahmed to include the claimed name followed by ":" to quickly identify a break in a segment.

Considering claim 18, Ahmed discloses cues including a token phrase "Jane Doe, WXYZ news, reporting live from Anytown, USA" to indicate a break between segments. It would have been obvious modifying Ahmed to include "I'm" would have also provided a cue indicating a break between segments since news reporters often identify themselves by "I'm" followed by their name. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Ahmed to include the claimed "I'm" to quickly indicate a break between segments since this phrase is often used by reporters.

Considering claim 25, Ahmed discloses using token phrases like "we go now to" and "more on that". It would have been obvious token phrases like "coming up" and "next on" would have also indicated a break between segments since these phrases are often used in the news. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Ahmed to include the claimed phrases to quickly identify breaks or transitions in the segment since these phrases are often used.

Considering claim 26, Ahmed discloses the claimed sign off phrase (see col 23 lines 55-59 "Jane Doe, WXYZ news, reporting live from Anytown, USA").

Considering claim 27, Ahmed discloses using token phrases like "we go now to" and "more on that" to indicate and identify a break or transition in a segment. It would have been obvious token phrases like "that is all" or "that's all" would have also indicated a break between segments since these phrases are often used in the news. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Ahmed to include the claimed phrases to quickly identify breaks or transitions in the segment since these phrases are often used.

**V. Claims 55 - 57 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ahmed in view of Youman et al (5,629,733).**

Regarding claim 55, claim 55 recites some of the same limitations as recited above, and thus is rejected for at least those reasons provided above. Claim 55 further recites presenting a plurality of related story segments using a layered hierarchical presentation of the summary representations at a relatively high hierarchical level and the source data at a relatively low hierarchical level, together with hyperlinks permitting navigation among related story segments to a desired hierarchical level representation.

Ahmed discloses displaying a plurality of related summary story segments (see stories for “Headline News” in fig 2-b) with source information (see “Headline News” icon 213 on the right) and hyperlinks 215 at the top (see fig 2-b).

Youman teaches displaying hierarchical levels with a summary of a program located at the top of the screen with the source information at the bottom (see fig 24a). It would have been obvious from Youman placing the source information on a lower level of the screen would have provided a better viewing of the summary since the source information would not be in the way i.e. in the lower corner. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Ahmed to include the claimed hierarchical level to place the more important information like the summary information on top and the source of the information on the bottom to provide a more clearly prominent display of the important summary information.

Considering claim 56, Ahmed discloses the claimed information is a text stream, the source data is text relating to a story segment and the summary representation

includes named entities (see fig 2-b, named entities met by "Erin: A Tropical Storm" the story segment is met by the summary description of "Erin: A Tropical Storm").

Considering claim 57, Ahmed discloses viewing image data (see fig 2-b) and thus discloses the claimed "information stream is an image stream". Further, Ahmed discloses displaying frames of information including a title and summary (see item 214 fig 2-b, frame 214 meets "keyframe" limitation).

***Allowable Subject Matter***

**VI. Claims 59-62 are allowed.**

***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

**VII. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.**

Janse et al (6,340,971) - key-frame based video display  
Blum et al (5,918,223) - segmentation of audio information  
Liou et al (6,278,446) - organization and browsing of video  
Yeo et al (5,821,945) - browsing based on content and structure  
Wissner (5,752,029) - editing multimedia composition

**Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks  
Washington, D.C. 20231

**or faxed to:**

(703) 308-9051, (for formal communications intended for entry)

**Or:**

(703) 308- 5399 (for informal or draft communications, please label  
"PROPOSED" or "DRAFT")

Hand-delivered responses should be brought to Crystal Park II, 2121  
Crystal Drive, Arlington, VA., Sixth Floor (Receptionist).

Any inquiry concerning this communication or earlier communications from the examiner

should be directed to Vivek Srivastava whose telephone number is (703) 305 - 4038.  
The examiner can normally be reached on Monday - Thursday from 8:00 am to 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andy Faile, can be reached at (703) 305 - 4380.

Any inquiry of a general nature or relating to the status of this application or proceeding

should be directed to the group receptionist whose telephone number is (703) 305 - 3900.

VS 6/13/03



VIVEK SRIVASTAVA  
PATENT EXAMINER